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REMARKS

Claims 1-16 of the application stand rejected. Applicant respectfully requests reconsideration of pending Claims 1-16 in light of the remarks herein.

35 U.S.C. §103

Claims 1, 7, 8 and 10 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,754,862 ("Jones") in view of U.S. Patent No. 6,016,392 ("Jordan"). Claims 2, 3 and 4 stand rejected under 35 U.S.C. §103 as being unpatentable over Jones in view of Jordan, in further view of Boujarwah ("Testing syntax and semantic coverage of Java language compilers") and in further view of AP ("AP ("Arrays, pointers, pointer arithmetic"). Claims 5 and 6 stand rejected under 35 U.S.C. §103 as being unpatentable over Jones in view of Jordan, in view of Boujarwah and in further view of Kathleen Fisher, et al. ("What is an Object Oriented Programming Language?", hereafter "Kathleen"). Claims 9 and 11 stand rejected under 35 U.S.C. §103 as being unpatentable over Jones in view of Jordan, in Boujarwah and in further view of Danel Liang ("Java Programming"). Claims 12, 13, 15 and 16 stand rejected under 35 U.S.C. §103 as being unpatentable over TO ("Object Reference Casting") in view of AP and in further view of Boujarwah. And finally, Claim 14 stands rejected under 35 U.S.C. §103 as being unpatentable over TO in view of AP, in view of Boujarwah and in further view of U.S. Patent No. 6,421,681 B1 ("Gartner"). Applicant respectfully traverses all these rejections.

Applicant respectfully points out that the Examiner these rejections are essentially the same as the rejections presented in the Final Office Action dated June 18, 2004 in the parent application, with the addition of the Boujarwah reference. Applicant respectfully submits that the addition of Boujarwah does not render moot the arguments previously presented with respect to the remaining references. Unfortunately, since the Examiner failed to address any of Applicant's previous arguments, Applicant hereby reiterates the previously presented arguments, modified to address Boujarwah.

With respect to independent Claims 1, 8 and 10, as described in the specification, in embodiments of the invention, the internal data structure of objects which are instances of a class that implements interfaces may be modified to include extra fields, where the extra fields include pointers to interface vtables for the interfaces implemented by the class. These pointers may

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allow more efficient dispatch of interface functions and/or allow the efficient casting of references of an interface type into references whose type is defined by the class that implements the interface (Specification, Page 9, lines 11- 18). The Examiner concedes that this limitation is not taught by either Jones or Jordan, but suggests out that Boujarwah teaches this element and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Jones, Jordan and Boujarwah because Boujarwah's. Applicant strongly disagrees.

Applicant respectfully submits that Boujarwah does not teach or suggest the use of pointers in this manner. The sections the Examiner highlights in Boujarwah describe the following:

"12. A reference to the class Object can be cast to an array type of the reference actually refers t an array object of the specified type.

13. A reference to an interface type can bc cast to a class type if the reference actually refers to an instance of the specified class or any of its subclasses."

Boujarwah, page 22, lines 35-40.

Applicant respectfully submits that nothing in Boujarwah teaches or suggests the element *of an object, the object being an instance of the class, the object comprising a second pointer configured to point to the interface vtable associated with the interface, the second pointer allowing for efficient casting of references of an interface type into references whose type is defined by the class configured to implement the interface*, as claimed. For example, there is no mention in Boujarwah of a second pointer configured to point to the interface vtable associated with the interface. The combination of Boujarwah with Jones and Jordan therefore does not teach or suggest at least this element of Claims 1 and 8. Jones, Jordan and Boujarwah therefore do not render independent Claims 1, 8 and 10 unpatentable and Applicant respectfully requests the Examiner to withdraw the rejection to these claims.

Claims 2-6 are dependant on independent Claim 1, Claim 9 is dependant on Claim 8 and Claim 11 is dependant on Claim 10. As previously described, Jones, alone or in combination with Jordan and/or Boujarwah, does not render independent Claims 1, 8 and 10 unpatentable. The addition of AP, Kathleen and/or Java Programming to Jones and/or Jordan also does not teach or suggest the elements of Claims 1, 8 and/or 10, and therefore these references also do not

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render the dependant Claims 2-6, 9 and 11 unpatentable. Applicant respectfully requests the Examiner to withdraw the rejections to these claims.

With respect to independent Claims 12 and 15, TO includes a discussion of object reference casting (TO, Page 1) while AP appears to be a discussion of how arrays are accessed in C (AP, Page 1). The Examiner concedes that the combination of these references does not explicitly teach the pointer allowing for efficient casting of the first reference but again, suggests that Boujarwah teaches this element and that it would have been obvious to one of ordinary skill in the art to combine Boujarwah with TO and AP. Again, Applicant strongly disagrees.

The sections of Boujarwah highlighted by the Examiner are presented above with respect to Claims 1, 8 and 10 (Boujarwh, page 22, lines 35-40). Applicant submits that these sections do not teach or suggest the claimed element of *receiving a pointer, the pointer contained in the object, the pointer configured to point to a canonical base address of the object, the pointer allowing for efficient casting of the first reference*, as claimed. As previously discussed and conceded herein by the Examiner, the combination of TO and AP also fail to teach or suggest this element. Applicant therefore fails to understand the Examiner's assertion that the combination of Boujarwah with TO and AP renders independent Claims 12 and 15 unpatentable. Applicant respectfully submits that nothing in Boujarwah teaches or suggests the claimed element(s) and that the combination of Boujarwah to TO and AP therefore cannot render independent Claims 12 and 15 unpatentable. Since Claims 13 and 16 are dependent on Claims 12 and 15, TO, AP and/or Boujarwah also do not render these claims unpatentable. Applicant therefore respectfully requests the Examiner to withdraw the rejection to these claims.

Finally, Claim 14 stands rejected under 35 U.S.C. §103 as being unpatentable over TO in view of AP, in further view of Boujarwah and in view of Gartner. Claim 14 is dependant on Claim 12. As previously discussed, TO, AP and Boujarwah do not teach or suggest the elements of Claim 12. The addition of Gartner to TO, AP and Boujarwah also does not teach or suggest these elements of Claim 12. Since Claim 14 is dependant on Claim 12, TO, AP, Boujarwah and/or Gartner therefore also do not render Claim 14 unpatentable.

In summary, Applicant respectfully submits that none of the references cited, alone and/or in combination, render Claims 1-16 unpatentable. Applicant therefore respectfully requests the Examiner to withdraw the rejection to Claims 1-16 under 35 U.S.C. §103.

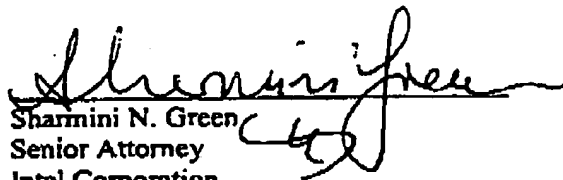
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CONCLUSION

Based on the foregoing, Applicant respectfully submits that the applicable objections and rejections have been overcome and that pending Claims 1-16 are in condition for allowance. Applicant therefore respectfully requests an early issuance of a Notice of Allowance in this case. If the Examiner has any questions, the Examiner is invited to contact the undersigned at (714) 669-1261.

Respectfully submitted,

Dated: July 14, 2005
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